

museums and botanic gardens offer much to compensate for the lack of things that surround the country pupils.

NEW YORK CITY.

## PROCEEDINGS OF THE CLUB

MEETING OF APRIL 25, 1923

The meeting of the above date was held in the Museum of the New York Botanical Garden.

The following were elected to membership:

John M. G. Emery, Garden City, N. Y.

Prof. Will S. Monroe, Montclair, N. J.

Rafael A. Toro, Insular Experiment Station, Rio Piedras, Porto Rico.

The first paper on the scientific program was by Mr. J. A. Faris on "The Black Stem Rust of Wheat and the Common Barberry in the United States." An abstract by the speaker follows:

The increasing losses during recent years due to the black stem rust (*Puccinia graminis*) of small grains throughout the north central grain-growing states led the United States Department of Agriculture to make a survey to determine the presence of the common barberry throughout this region. Studies were also made to determine what part the barberry was taking in the spread of stem rust to the wild grasses and neighboring grain fields.

This preliminary survey revealed the wide-spread occurrence of barberry throughout the entire region and bushes were found to be rusted in April and May. The rust spread from the infected bushes directly to the wild quack grasses, wild barley, etc., and to neighboring grainfields several weeks before rust appeared upon grainfields considerable distances from infected barberry.

In order to prevent this early spread of the rust and to eliminate several million centres of infection, a campaign to eradicate species of *Berberis* and *Mahonia* susceptible to the stem rust was begun in 1918. This campaign is now being vigorously carried on by both the United States Department of Agriculture and the individual states in the eradication area. All the states have passed laws requiring the eradication of these barberry bushes.

One of the most alarming phases of the situation is the escape of the common barberry from cultivation through the dissemination of seeds by birds and through other agencies. Such escaped barberry has been found along streams, in wooded areas, fence rows, etc., and presents one of the most difficult problems of the campaign. Chemical means of killing the bushes have been found effective in preventing sprouts from broken roots from reproducing the shrubs.

The campaign involves a vast amount of work since the inspectors must examine all plantings of shrubbery as well as wooded areas to make sure some bush does not go unnoticed and in after years serve as a centre for spread of stem rust and of barberry seeds which in turn will produce more bushes to spread the rust.

The second paper was by Dr. Alfred Gundersen on "The Systematic Position of the Caryophyllaceae and the Frankeniaceae." The author's abstract follows:

The little group of salt-loving plants, the *Frankeniaceae*, appears to be a link connecting the *Caryophyllaceae* and related families with the great group of flowers which have chiefly parietal placentation.

The genus name *Frankenia* was given by Linnaeus. In the *Fragmenta Methodis Naturalis* he places it in *Caryophyllei*. Jussieu places it among "genera *Caryophylleis affinia*." St. Hilaire in 1824 established the family *Frankeniaceae*, placed by De Candolle before the *Caryophyllaceae*, an arrangement kept up by Bentham and Hooker. But in the Eichler and the Engler systems these families are far separated.

The *Frankeniaceae* are mostly small tufted shrubs, a few herbaceous plants. The *Caryophyllaceae* have often a similar appearance, only a few being woody. The leaves of both families are opposite, narrow and entire, in the *Frankeniaceae* often with rolled edge. The slightly swollen node and stipular sheath are very similar in the two families. The inflorescence in both cases is a cyme, with regular flowers. The calyx of the *Frankeniaceae* is gamosepalous, like the *Dianthus* group of the *Caryophyllaceae*. The ridges of the calyx suggest *Plumbago*. The ligule of the petals is a remarkable character common to these families. The pistil is one-celled, of several carpels. In the *Frankenias* the placentation is parietal, with ovules at the lower end only. In

the *Caryophyllaceae* the placentation is central, but in some cases, such as *Scleranthus*, there is only a single ovule and seed, much like the single seed of part of the *Frankenias*. The capsule, the often papillate seed, and the presence of endosperm are other common characters. While a majority of the *Caryophyllaceae* have a curved embryo, it is nearly straight in *Dianthus* and other genera.

In conclusion, these numerous striking similarities seem to support the earlier view that, in a natural system, the *Frankeniaceae* and *Caryophyllaceae* cannot be separated.

The *Elatinaceae*, doubtless near *Frankeniaceae*, also in several ways suggest *Caryophyllaceae*.

The few differences between the families *Frankeniaceae* and *Caryophyllales*, the more herbaceous forms, the central placenta, and the usually curved embryo of the latter group suggests that this is the more highly specialized group. In any case the placing of *Caryophyllaceae* before the Ranales appears to be entirely misleading.

After discussion, the meeting adjourned.

MARSHALL A. HOWE,  
Secretary.

#### MEETING OF MAY 8, 1923

The meeting of the above date was held at the American Museum of Natural History.

Tenny V. Dickson, New York City, was elected to membership. The resignation of Miss M. Beatrice Greenwood was accepted.

The program of the evening consisted of an illustrated talk by Dr. Marshall A. Howe under the title of "Some Floral and Scenic Features of Cuba."

The New York Botanical Garden during the twenty-five or more years of its existence has sent numerous exploring expeditions to Cuba and these have added much to the existing knowledge of the flora of the island. Photographs, taken chiefly in the provinces of Pinar del Rio, Oriente, Camagüey, and Matanzas, were exhibited. Conspicuous in the flora of the dry southeastern parts of the island are the cacti, some of which have been described as new by Drs. Britton and Rose. Among the cacti is the remarkable *Dendrocereus nudiflorus* which grows

to be twenty-five or thirty feet high and has a tree-like trunk sometimes two feet in diameter. Another one, a *Pereskia*, resembles a small apple tree and, unlike most cacti, has well-developed leaves. A cactus of very different habit, the melon cactus or Turk's-head, forms simple, egg-shaped cushions one or two feet high, surmounted by the reddish, fez-like outgrowth which bears the flowers. The Turks Islands are said to have derived their name from the abundance there of a plant of this general character.

The palms, of which there are about thirty kinds in Cuba, constitute a conspicuous feature of the flora of the island. The stately royal palm may be considered Cuba's noblest contribution to the landscape gardening of the tropics.

MARSHALL A. HOWE, *Secretary*.

#### MEETING OF MAY 23, 1923

This was a joint meeting of the Torrey Botanical Club, the New York Bird and Tree Club, the American Fern Society, and the Wild Flower Preservation Society of America, and it was held at the Brooklyn Botanic Garden. Nearly one hundred members of these organizations and their guests met at 11 A. M. and were conducted around the Botanic Garden by Dr. Arthur H. Graves, Dr. George M. Reed, and Mr. Norman Taylor.

At 2:30 P. M. an audience of about seventy-five assembled in one of the lecture rooms and witnessed a demonstration of an automatic balopticon and a daylight projector by Mr. P. L. Ricker, Secretary-Treasurer of the Washington (D. C.) Chapter of the Wild Flower Preservation Society of America. The photographs and legends exhibited were especially designed for wild flower preservation publicity in schools and public places.

This demonstration was followed by an illustrated lecture on "Game Laws for Ferns and Wild Flowers" by Dr. Ralph C. Benedict, Editor of the American Fern Journal. Dr. Benedict discussed existing laws on this subject in Connecticut, Maryland, and Vermont, and exhibited colored lantern-slide photographs of plants in special need of protection.

A motion was made by Augustus O. Bourn, Jr., that the members of the associated societies present express their approval of legislation looking toward conservation of American wild flowers. This was unanimously carried. On motion of

Dr. Benedict it was voted that the meeting appoint a committee to consider what further steps should be made toward conservation with special reference to drafting a law for the state of New York. Mrs. Albert Michelson, of the Illinois chapter of the W. F. P. S., described work that was going on in Illinois along the line of conservation. Dr. Gager felt that the object of the committee should be to enter into communication with all of the organizations of this state to consider what further steps should be made toward conservation of American wild flowers. Mrs. William E. Jones of Philadelphia, from the Pennsylvania branch of the W. F. P. S., stated that she felt that her society would gladly cooperate. Dr. Gager recommended that a suitable committee be elected quickly. Mrs. Britton felt that the State Museum at Albany should be represented in the legislation. Mr. Bourn advocated a small committee of four members. Thus only would the work go through quickly. Mr. P. L. Ricker, of the Washington branch of the W. F. P. S., thought that the societies of other states should appoint similar committees for their states to incorporate similar laws. Mrs. Britton suggested the following persons for the proposed committee: Dr. G. Clyde Fisher, of the American Museum of Natural History, from the New York Bird and Tree Club; Dr. M. A. Howe, of the New York Botanical Garden, from the Torrey Botanical Club; Dr. R. C. Benedict, of the Brooklyn Botanic Garden, from the Fern Society; Dr. Homer D. House, of the State Museum, from the W. F. P. S. Dr. Benedict suggested that there be invited into this committee a representative of each of the two New York Gardens and also a lawyer. Mr. Bourn spoke in favor of this suggestion. A motion to this effect was made and carried. The motion of Dr. Howe that Mr. Bourn be added to this committee as legal representative was carried. Mrs. Britton suggested that a general law, intelligible to everyone and applicable to special plants, was called for. Extemporaneous meetings of each of the societies represented were then held consecutively, and the delegates suggested by Mrs. Britton were thus duly elected. It was suggested that this committee should take the necessary steps to formulate a conservation law, and should send copies of this law to secretaries of all interested societies.

A. H. GRAVES and MARSHALL A. HOWE,  
*Secretaries.*